

Notice of Allowability

Application No.

09/998,897

Applicant(s)

KANAZAWA ET AL.

Examiner

MANSOUR M. SAID

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/12/04.
2. ☒ The allowed claim(s) is/are 1-15, 17-24 & 27-35, and renumbered as 1-32.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>6/2/05 & 8/12/04</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mrs. Olenginski, Allison on September 16, 2005.

2. The application has been amended as follow:

IN THE CLAIMS

Please cancel claims 25-26.

Claim 30, lines 12-13 after "at least said second electrodes", please delete "with said first polarity on at least said second electrodes".

Allowable Subject Matter

3. Claims 1-15, 17-24 and 27-35 are allowed.

4. The following is an examiner's statement of reasons for allowance: Claims 1-24 and 27-35, 17-24 and 27-35 are allowed since certain key features of the claimed invention are not taught or fairly suggested by prior art. **In claims 1 and 28, "carrying out the sustain discharge by**

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alternately applying sustain pulses to said first and second electrodes, wherein the auxiliary discharge is carried out by applying a voltage pulse, having the same polarity as the voltage pulse for carrying out the address discharge, between said second electrodes and said third electrodes". In claim 12, "setting a voltage of any of said second electrodes finishing an address process lower than a non-selection voltage of said second electrode when carrying out the address process and after finishing an address period of one of said odd and even electrode groups". In claim 13, separately carrying out in temporal a plurality of discharges of an initial stage of a sustain discharge period by each adjacent odd electrode or each adjacent even electrode; and setting low one or both voltages of said first electrodes and said second electrodes, where the sustain discharge is not carried out. In claims 15, 30 and 34, "forming wall charges of said first polarity on at least said second electrodes, with said first electrodes set to have said first polarity with respect to said second electrodes, forming wall charges of said second polarity on said first electrodes, and applying a voltage pulse to said third or second electrodes or to both electrodes so as to set said third electrodes to have said first polarity and to set said second electrodes to have said second polarity". In claim 27, "carrying out a sustain discharge by alternately applying sustain pulses to said first and second electrodes, wherein an auxiliary discharge is carried out between said first electrodes and said third electrodes, and between the address discharge and the sustain discharge". In claim 32, carrying out an address discharge between said second electrodes and said third electrodes, to form wall charges of a first polarity on at least said second electrodes, with said first electrodes set to have said first polarity with respect to said second electrodes, and to form wall charges having said second polarity on said first electrodes; applying a voltage pulse to said first or third electrodes or to both electrodes so

as to set said third electrodes to have said first polarity and to set said first electrodes to have said second polarity to generate a discharge in a discharge cell that starts a discharge without applying a voltage pulse that brings about the address discharge through said thirds electrodes”.

In claim 33, “carrying out said sustain discharge by alternately applying sustain pulses to said first and second electrodes, wherein a voltage to be applied to said second electrodes, when carrying out the auxiliary discharge, is a voltage that decreases a potential difference between the voltage applied to said second electrodes and the voltage of an additional pulse to be applied to said first electrodes”. **In claim 35,** “wherein said control circuit carries out a sustain discharge by alternately applying sustain pulses to said first and second electrodes, and carries out an auxiliary discharge between said first electrodes and said third electrodes, between the address discharge and the sustain discharge”. The closest prior art Kanazawa et al. (6,603,446 B1) teaches an addressing pulse of a voltage is applied selectively to the address electrodes. During the sustaining discharge period, a sustaining pulse of a voltage is applied alternately to the Y electrodes and X electrodes, and a plasma display device includes a first drive circuit for driving the second electrodes, a second drive circuit for outputting a pulsating voltage to be applied in electrodes, and third circuits associated with the second electrodes for applying the pulsating voltages output from the first drive and second drive circuit to the second electrodes. This triggers a sustaining discharge, however, singularly or in combination with other prior art, fails to anticipate or render the above underlined limitations obvious.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mansour M. Said

whose telephone number is 571-272-7679. The examiner can normally be reached on Monday through Friday from 7:00 A.M. to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala whose telephone number is 571-272-7681.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

571-273-8300 (for Technology Center 2600 only)

Hand-delivered responses should be brought to the Customer Service Window at the Randolph Building, 401, Dulany Street, Alexandria, VA 22314.

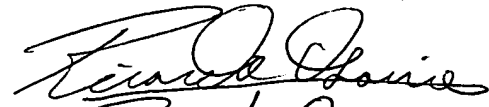
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mansour M. Said

September 16, 2005


Ricardo Osorio
PRIMARY EXAMINER